Pattern of use of radiotherapy for lung cancer: Descriptive study

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Introduction. Lung cancer remains one of the most prevalent forms of cancer, with approximately 20 000 new cases reported every year in Spain, and 18 000 deaths due to this disease. Radiotherapy, with or without other therapeutic modalities, is an effective treatment. Our objective was to report on the use of radiotherapy for lung cancer and its variability in our region during 2007.
Objective. To report on the use of radiotherapy for lung cancer, its variability in our region, and to compare our results with the previous study done in 2004 (VARA-I) in our region and with other published data.
Methods. We reviewed the clinical records and radiotherapy treatment sheets of all patients undergoing radiotherapy for lung cancer among patients diagnosed during 2007 in the 12 public hospitals in Andalusia. Data were gathered on hospital type, patient type, radiotherapy treatment characteristics, histological type, and tumor stage.
Results. 3051 patients were diagnosed with lung cancer, but only 610 patients underwent initial radiotherapy (19.9%). Most patients had stage III squamous cell lung cancer with good performance status and were treated with radical therapy. The majority of patients with non-small and small cell lung cancer were treated with concomitant chemo-radiotherapy. The most common regimen for patients treated with palliative intent was 30 Gy (10 fractions × 3 Gy per fraction). The total irradiation rate was 19.6% with significant differences among provinces (range, 8.5–25.6%; $p < 0.001$). These differences were significantly correlated with the geographical distribution of radiation oncologists ($r = 0.78$; $p = 0.02$). Our results were similar to other published data and previous study VARA-I.
Conclusion. There is still excessive variability in the application of radiotherapy for lung cancer in our setting.

http://dx.doi.org/10.1016/j.rpor.2013.03.312

Prediction of radio-induced dysphagia in lung cancer

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Introduction. A simple clinical tool able to predict the probability of radio-induced dysphagia on inoperable lung cancer patients has been designed. Its applicability may suppose the preventive therapeutic measures on patients with high probability to develop it.
Objectives. Compare the real radio-induced acute dysphagia degree with the one obtained according to the MAASTRO Clinic prediction model.
Methods. Retrospectively, the clinical data of 25 lung cancer patients in stages I–III treated with conformal radiotherapy with radical intention, exclusively or associated with sequential or concomitant chemotherapy were collected. With this data (age, gender, WHO performance status, mean esophageal dose (MED), maximum esophageal dose (MAXED) and overall treatment time (OTT), the MAASTRO Clinic radio-induced acute dysphagia (RAD) prediction model (for G2 and G3) was applied and it was compared with the real toxicity (CTV v3.0). The data was analyzed with the statistical program SPSS v.15.
Results. The sample media age was of 65 years. 19 patients (76%) were of male sex. The 84% (21) correspond to NSCLC and 16% (4) to SCLC. The 88% (22) were stage III. Regarding to the treatment modality: 13(52%) received concomitant chemotherapy-radiotherapy, while 10 (40%) sequential radiotherapy. Concerning to the RAD: 3(12%), 7(28%) and 13 (52%) correspond to G0, G1 and G2 respectively. There was not G3. The real toxicity was compared to the one obtained according to the predictive model, nevertheless, no statistically significant correlation was obtained.
Conclusions. In our series there is not statistically correlation between the real RAD and the one obtained applying the mentioned predictive model. However, there is a clear tendency to reach it, especially, in relation to the II degree when it surpasses the 50% of probability of observing it. We will continue recollecting data in order to expand the sample size and be able to demonstrate the stated relationship.

http://dx.doi.org/10.1016/j.rpor.2013.03.313

Prognostic value of primary tumor irradiation in small cell lung cancer (SCLC)

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Introduction. Small Cell Lung Cancer (SCLC) makes up about 15% of all lung cancer. This histology group have the poorest prognostic at this cancer site because its high tendency to local and regional recurrence and, mainly, distant metastases. Role of radiation treatment exclusively or combined with chemotherapy, is uncertain.